

REMARKS

This is intended as a full and complete response to the Office Action dated October 31, 2003, having a shortened statutory period for response set to expire on January 31, 2004. Please reconsider the claims pending in the application for reasons discussed below.

Claims 1-4 and 19-42 remain pending in the application and are shown above. Claims 5-18 have been cancelled by Applicant. Claims 1-4, 19, 21-24, 30 and 31 are rejected, claims 20, 25 and 32-37 stand objected, and claims 26-29 and 38-42 are indicated to be allowable by the Examiner. Reconsideration of the rejected claims is requested for reasons presented below.

Claim Rejections - 35 U.S.C. § 103

Claims 1-4, 19, 21-24, 30 and 31 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Ogden* (GB 1,201,435) in view of *Colmerauer* (U.S. Patent Nos. 2,011,036 and 2,690,783).

The Examiner states that *Ogden* discloses an apparatus and method for expanding pipe. The Examiner further states that the expansion members 14 are mounted in a body and radially support sleeves 15 that are pressed outwardly when the hydraulic rams are actuated. The Examiner additionally states that *Ogden* is considered to disclose all of the claimed features except for the body and sleeves being rotatable within the tubing. The Examiner states that *Colmerauer* discloses that it is old and well known to expand tubing by rotation and it would have been considered obvious to rotate the device of *Ogden* when expanding the tubing as taught by *Colmerauer* since rotation during expansion gives a more uniform expansion than just pressing outwardly.

Applicant respectfully traverses the rejection. Applicant respectfully submits that *Ogden* discloses a device that has multiple rams that each carry a former having an outer periphery providing successive and closely adjacent arcs of a desired circle. Therefore, there is a gap between the ends of the adjacent formers when the device in *Ogden* is in the expanded condition. Since the gaps provide a discontinuous circumference used to expand the pipe, the portions of the pipe at the gaps are less

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expanded than the portions of the pipe touching the former. Thus, the device in *Ogden* essentially forms a gear, and the less expanded portions of the pipe at the gaps form splines that mate with the device. Rotation of the device disclosed in *Ogden* is impossible because either the pipe or the device would break upon rotation due to this gear/spline relationship between the device and the pipe. Therefore, it would not have been considered obvious based on *Colmerauer* to rotate the device of *Ogden*.

Thus, *Ogden* in view of *Colmerauer* fails to teach, show, or suggest a tubing expander that includes a body adapted for rotation within tubing to be expanded, at least one radially movable expansion member mounted on the body, and a sleeve mounted about the body and being radially supported by the expansion member, the sleeve being adapted to be offset from the body when the expansion member is actuated to provide a rolling contact with an inner surface of the tubing to be expanded as the body is rotated within the tubing, as recited in claim 1 and claims 2-4, 19, and 21 dependent thereon. Accordingly, Applicant respectfully requests withdrawal of the rejection and allowance of the claims.

Further, *Ogden* in view of *Colmerauer* fails to teach, show, or suggest a method of expanding tubing that includes providing a tubing expander comprising a body carrying at least one radially movable expansion member and a sleeve mounted about the body and being radially supported by the expansion member, locating the expander in a tubing section of a first diameter, radially extending the expansion member to urge a portion of the sleeve into contact with an internal surface of the tubing section, and rotating the expander such that the sleeve is rolled around the internal surface of the tubing section and expands the tubing section to a larger second diameter, as recited in claim 22 and claims 23-24 dependent thereon. Accordingly, Applicant respectfully requests withdrawal of the rejection and allowance of the claims.

Additionally, *Ogden* in view of *Colmerauer* fails to teach, show, or suggest a tubing expander that includes a body adapted for rotation within tubing to be expanded, at least one radially movable expansion member mounted on the body and a sleeve mounted about the body and being radially supported by the expansion member, the sleeve being adapted to be offset from the body when the expansion member is actuated to provide a rolling contact with an inner surface of the tubing to be expanded

as the body is rotated within the tubing, wherein the expander comprises a plurality of radially movable expansion members and associated sleeves, as recited in claim 30 and claim 31 dependent thereon. Accordingly, Applicant respectfully requests withdrawal of the rejection and allowance of the claims.

Allowable Subject Matter

Claims 20, 25 and 32-37 stand objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant respectfully submits that claims 20, 25 and 32-37 are allowable based on the traversal to the independent claims 1, 22 and 30 from which claims 20, 25 and 32-37 depend. Thus, Applicants respectfully request withdrawal of the objection and allowance of the claims.

Claims 26-29 and 38-42 are allowed.

Applicant appreciates allowance of the claims.

New Claims

Applicant respectfully submits that *Ogden* discloses a device that has multiple rams that each carries a former to provide successive and closely adjacent arcs of a desired circle. A hydraulic distributor in *Ogden* simultaneously distributes hydraulic pressure to the rams in order to simultaneously extend the formers about the same center line as the centerline of the device. Further, *Colmerauer* discloses a tool with sleeves mounted on a bearing surface that is integral with a body of the tool.

Thus, *Ogden* in view of *Colmerauer* fails to teach, show, or suggest a tubing expander that includes a body adapted for rotation within tubing to be expanded, at least one radially movable expansion member mounted on the body and a sleeve mounted about the body and being radially supported by the expansion member, the sleeve having a centerline adapted to be offset from a centerline of the body when the expansion member is actuated, as recited in claim 43. Accordingly, Applicant respectfully requests allowance of claim 43.

Further, *Ogden* in view of *Colmerauer* fails to teach, show, or suggest a method of expanding tubing that includes providing a tubing expander comprising a body carrying at least one radially movable expansion member and a sleeve mounted about the body and being radially supported by the expansion member, locating the expander in a tubing section of a first diameter, radially extending the expansion member to urge a centerline of the sleeve away from a centerline of the body and a portion of the sleeve into contact with an internal surface of the tubing section, and rotating the expander such that the sleeve expands the tubing section to a larger second diameter, as recited in claim 44. Accordingly, Applicant respectfully requests allowance of claim 44.

New claims 45 and 46 depend from claims 1 and 22 that Applicant submit are in condition for allowance based on the traversal above. Accordingly, Applicant respectfully requests allowance of claims 45 and 46.

Conclusion

The references cited by the Examiner, alone or in combination, do not teach, show, or suggest the invention as claimed. Having addressed all issues set out in the office action, Applicant respectfully submits that the claims are in condition for allowance and respectfully requests that the claims be allowed.

Respectfully submitted,



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